

## Skills

---

- Languages:** Python, TypeScript, Java, JavaScript, C++, C#
- Frontend:** React, Angular, React Native, HTML, CSS
- Backend:** Node.js, SQL, PostgreSQL, MongoDB, Flask, REST

## Experience

---

### Front-End Developer | Nicoya Lifesciences

May 2023 - Aug 2023

- Led front-end development in **TypeScript + Angular** for a major feature, unlocking a new experiment type that increased the number of interactions in a single drug discovery screening **by 50%**
- Addressed **40+ production bugs** and improvements to accelerate adaptation to user needs, using Jira to prioritize requirements and deploying via **CI/CD pipeline** in an Agile approach
- Designed, built, and tested reusable components in **Angular**, including a sortable results table that systematized **15+ binding metrics** to help scientists identify potential drug candidates
- Developed unit test suite for back-end data processing tools, helping to improve error handling and software reliability

### Full Stack Software Developer | St Michael's Hospital

Sep 2022 - Dec 2022

- Migrated medication algorithm to **TypeScript**, enhancing code maintainability and developer productivity
- Reduced codebase by 30%** through refactoring duplicate code and replacing outdated dependencies with native functions
- Developed a test automation framework in **Python** that translates **10000+ cases** written in Excel into **TypeScript** unit tests, eliminating need for brittle Selenium testing and bridging gap between researchers and developers
- Designed and maintained easthma.ca, building features such as a **JavaScript + Bootstrap** testimonials carousel that secured the backing of a Fortune 500 biopharma company

### Medical Technology Developer | St Michael's Hospital

Jan 2022 - Apr 2022

- Developed a **Python** application for a multi-site clinical trial, leveraging OCR to scan a patient's lung function test to obtain predictive insights on the consequences of continued smoking on COPD health outcomes
- Integrated a predictive model using **REST API**, graphing projected lung decline with **Matplotlib** to create a quit smoking aid
- Built an automated test script using **Selenium + Java** for regression testing a **1000+ user** asthma management platform, identifying **90% of bugs** before production

### Engineering Design Research Assistant | University of Waterloo

May 2021 - Aug 2021

- Leveraged web scraping methods in **Python** to extract **300+** engineering program descriptions from university websites
- Built an **NLP Pipeline** using **Python, NLTK** and **Pandas** to analyze top n-grams in engineering recruitment materials
- Led product and visual design for a web app that tracks students' design process when solving open-ended problems, **supporting 200+ undergrads** during Design Days hackathon

## Projects

---

### Recipro App | TU20 Cup

- Built a fully-featured social networking app in **React Native** that fosters reciprocal acts of kindness between neighbors
- Implemented a **Cloud Firestore** database to manage user information and task requests
- Ran user interviews and surveys with **50+ respondents** to refine social features and identify need for in-app messaging

### Cat Music Video Generator

- Flask** app that uses **NLP** to analyze song lyrics, scraping Google Images for relevant cat photos to generate a music video
- Used Genius API to retrieve lyrics, performing tokenization and part of speech analysis with **spaCy** to extract keywords
- Built an **HTML, CSS and JS** front-end with a song search bar and interactive image slideshow

## Education

---

### University of Waterloo | BASc Biomedical Engineering

Sep 2020 - Apr 2025 (Expected)

- Relevant Courses:** Data Structures & Algorithms (**C++**), Digital Computation (**C#**), Prototyping, Simulation and Design
- Related Awards:** 1st Place Waterloo Engineering Competition, NSERC Undergraduate Research Award (\$6,000)
- Extracurriculars:** BioMechatronics Design Team, Quizbowl, Scuba Diving Club